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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RIDDLE, KYLE M

ART UNIT PAPER NUMBER

3748

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,886

Applicant(s)

SHATTUCK, CHARLES W.

Examiner

Kyle M. Riddle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings filed on 6 August 2003 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5, 7, 14-16, 17, 22-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Giannone et al. (U.S. Patent 5,960,758).

Giannone et al. disclose a roller cam follower comprising:

- a main body including spaced apart walls or sides 117, 118 with same sized apertures at each end of bore 124 (column 4, lines 56-59 and Figure 5);

- a shaft assembly having a first portion or hollow sleeve 134 press-fitted on shaft 122 between the sides 117, 118 with an outer diameter larger than the bore apertures, a second portion or solid shaft 122 extending through the bore 124 and sides 117, 118 (column 4, lines 58-67 and Figure 5);

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- a cam follower roller 120 received between sides 117, 118 and rotatable about the sleeve 134, shaft 122, and roller bearings 130 (column 4, lines 58-67 and Figure 5);
- the first portion of sleeve 134 is substantially concentric with the second portion of shaft 122 and the cam follower roller 120 (Figure 5);
- the inner surface of the roller 120 has an anti-friction means or roller bearings 130 (column 4, lines 63-67 and Figure 5);
- the roller 120 having about the same width as the sleeve 134 (Figure 5);
- the shaft 122, sleeve 134, and roller 120 having diameters substantially complementary to each other (Figure 5).

4. Claims 1-3, 6, 14-16, 20-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadokawa (U.S. Patent 5,054,440).

Kadokawa discloses a cam follower device comprising:

- a main body with spaced apart support wall portions 7 having same-sized aperture openings (column 2, lines 20-21 and Figures 15 and 16);
- a shaft assembly having a first portion or hollow bush 12 with an outer diameter larger than the aperture openings and rotatably fitted around a second portion or steel shaft 8 extending through the support wall 7 openings (column 2, lines 18-21 and Figures 15 and 16);
- a cam follower with a roller outer ring 13 fitted around bush 12 and rotatable relative to the bush 12 and shaft 8 (column 2, lines 18-25 and Figures 15 and 16);
- the second portion or shaft 8 being non-rotatably fixed but the first portion or bush 12 allowed to slide or rotate with respect to the main body (column 2, lines 30-35);

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- the second portion or shaft 8 is substantially concentric with the first portion or bush 12 and with the cam follower or ring 13 (Figures 15 and 16);

- the inner peripheral surface of the outer ring 13 and the outer peripheral surface of the bush 12 are made of anti-friction ceramic material and allowed to slide along each other or rotate relatively (column 2, lines 27-34);

- the outer ring 13 and bush 12 having approximately the same widths (Figures 15 and 16);

- the second portion or shaft 8 having an enlarged head portion that is substantially flush with the support wall 7 (Figures 15 and 16);

- the shaft 8, bush 12, and outer ring 13 having substantially complementary diameters (Figures 15 and 16).

5. Claims 1, 4, 6, 7, 14, 16, 17, 22-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Fernandez et al. (U.S. Patent 6,604,498).

Fernandez et al. disclose a roller finger follower comprising:

- a main body with spaced apart sidewalls 17, 19 having first and second apertures (column 3, line 64 and Figures 2-3);

- a shaft assembly having a first portion or hollow axle 16a rotatably supported by roller bearings 18 and non-fixedly housing a second portion or two-part solid axial pins 22, 24 configured to be received in bore 15 of both sidewalls (column 3, lines 45-49, and Figure 3);

- a cam follower 10a with roller 14 between the sidewalls and rotatable about the shaft assembly bearings 18 and hollow axle 16a (column 3, lines 46-49 and Figure 3);

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- the first portion or axle 16a and second portion or pins 22, 24 being released from apertures in the sidewalls and thus being rotatable with respect to each other and the main body (column 4, lines 1-12 and Figure 3);

- the first and secondary portions 16a, 22, 24 being substantially concentric with each other and with the cam follower 10a and roller 14 (Figures 2 and 3);

- the roller 14 having an inner surface contacting an anti-friction means or rolling elements as bearings 18 (column 3, lines 45-49 and Figure 3);

- the pins 22, 24, axle 16a, and roller 14 having diameters substantially complementary to each other (Figure 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being obvious over Kadokawa.

Kadokawa discloses a cam follower device comprising a main body with spaced apart support wall portions having same-sized aperture, a shaft assembly having a first portion or hollow bush with an outer diameter larger than the aperture openings and rotatably fitted around a second portion or steel shaft extending through the support wall openings, a cam follower with a roller outer ring fitted around bush and rotatable relative to the bush and shaft, the second portion or shaft being non-rotatably fixed but the first portion or bush allowed to slide or rotate with respect to the main body, the second portion or shaft is substantially concentric with the

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first portion or bush and with the cam follower or ring, the inner peripheral surface of the outer ring and the outer peripheral surface of the bush are made of anti-friction ceramic material and allowed to slide along each other or rotate relatively. Kadokawa, however, fails to disclose the bush and shaft form integrally.

Kadokawa teaches the outer ring 13 fitted directly to shaft 8 without the need for a bush (column 2, lines 33-35), which suggests the bush and shaft can be formed integrally with each other for the attachment of the outer ring. The inclusion of the shaft being integrally formed or in separate components would have been obvious to one having ordinary skill in the art depending on material considerations, assembly requirements, etc. Moreover, there is nothing in the record which establishes that the application of such represents a novel or unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ'7 (CCPA 1975)).

8. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being obvious over Giannone et al., Kadokawa, or Fernandez et al.

Giannone et al., Kadokawa, and Fernandez et al. all disclose cam followers with side walls having apertures, pins or shafts through the apertures having certain diameters, a bush, axle, or sleeve fitted around the shaft having an inner and outer diameter, and a roller or ring with an inner and outer diameter rotatably mounted for following a cam. They, however, fail to disclose specific relative sizes of the wall aperture diameters compared to the outer diameters of the bush, axle, or sleeve.

Giannone et al., Kadokawa, and Fernandez et al. all teach cam followers with varying sizes of wall aperture diameters compared to their respective bush, axle, or sleeve outer diameters. The inclusion of the cited specific ratios of diameters is well within the skill of one

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having ordinary skill in the art depending on the specific anti-friction characteristics, space available, and material strength. Moreover, there is nothing in the record which establishes that the application of such represents a novel or unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)).

9. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadokawa in view of Malhotra (U.S. Patent 4,614,171).

Kadokawa discloses the cam follower cited above, however, fails to disclose the use of an anti-friction coating or outer ring.

Malhotra teaches a cam roller provided with any type of anti-friction means including needle bearings, a Teflon® coating or Teflon® cloth lining (column 2, lines 7-11). It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the teaching by Malhotra in the cam follower of Kadokawa, since the use thereof would have provided more anti-friction capability reducing the wear on the contact components of the cam follower.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of 3 patents.

- Calka (U.S. Patent 5,983,848) discloses a finger follower with roller bearings and a shaft pin.

- Pryba et al. (U.S. Patent 6,230,676) disclose a rocker arm assembly with roller bearings and a different type of shaft fastening means.

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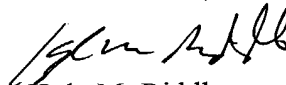
- Mues et al. (U.S. Patent 6,280,097) disclose a corrosion resistant cam follower bearing assembly with a sleeve around the shaft between the roller elements and follower.

Communication

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle M. Riddle whose telephone number is (703) 306-3409. The examiner can normally be reached on M-F (07:30-5:00) Second Friday Off.

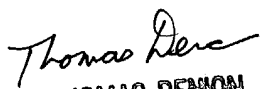
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kyle M. Riddle
Examiner
Art Unit 3748

kmr



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